

Amendment to the Claims

The listing of claims will replace all prior versions, and listings of claims in the Application.

1. (*currently amended*) A method for generating a preview of a print pattern on a substantially conical platen surface, an image of the print pattern being captured in a scan made up of a series of radial scan line images along an arcuate path, comprising:

for each group of radial scan line images, the steps of:

determining a representative sensor pixel value for pixels in a group of captured radial scan line images;

converting a polar coordinate position of the respective group of captured radial scan line images to a position in rectangular display window coordinates;

plotting the representative sensor pixel values determined in said determining step at corresponding rectangular display window coordinates; and

displaying the plot of the representative sensor pixel values in a display window as a preview of the ~~captured~~ print pattern image captured on the substantially conical platen surface.

2. (*original*) The method of claim 1 wherein determining a representative sensor pixel value includes determining an average sensor pixel value for pixels in the group of captured radial scan lines.

3. (*original*) The method of claim 1 wherein the group of radial scan line images consists of approximately 25 radial scan lines.

4. (*original*) The method of claim 1 further comprising the steps of:

receiving a request for a high resolution display of a selected area of the preview of the print pattern; and

converting the captured polar coordinate system image data contained in the portion of the preview of the print pattern to converted image data in a rectangular coordinate system.

5. *(original)* The method of claim 4 wherein determining a representative sensor pixel value includes decimating the converted image data.

4. *(second occurrence) (cancelled)*

6. *(canceled)*

7. *(canceled)*

8. *(canceled)*

9. *(canceled)*

10. *(canceled)*

11. *(previously presented)* The method of claim 4, wherein said converting comprises:

for each pixel in the user selected area, the steps of:

performing a look up to obtain conversion data including the polar coordinate data and the polar offset data associated with respective pixel coordinates;

retrieving at least one sample of stored captured image data; and

interpolating each retrieved sample with weighting based on the looked up offset data to obtain a respective pixel value in rectangular coordinate system.

12. *(currently amended)* A system for generating a display of a print pattern on a substantially conical platen surface, an image of the print pattern being captured in a scan made up of a series of radial scan line images along an arcuate path, comprising:

a non planar prism;

a scanning imaging system optically coupled to the non planar prism for capturing the image data in a polar coordinate system; and

an image conversion system wherein the image conversion system comprises a coordinate conversion module for converting the polar coordinate positions of the captured radial scan line images to positions in rectangular display window coordinates; and

a display processing system coupled to the scanning imaging system wherein the display processing system comprises a preview generation module for generating a preview display on the substantially conical platen surface of the captured print image preview display selected by a system user.

13. *(previously presented)* The system of claim 12 wherein the display processing system further comprises a high resolution display processing module for generating a high resolution display of an area of the preview display selected by a system user.

14. *(currently amended)* The system of claim 13 wherein the image conversion system further comprises:

a retrieval module for retrieving entries in a conversion data array and one or more samples from the captured raw polar image data;

an interpolation module for interpolating the samples using weighting based on the retrieved conversion data array entries to obtain the respective pixel values in a second coordinate system; and

a communications module for communicating the converted image data to the display processing system after all pixels in the selected area have been interpolated.

15. *(currently amended)* The system of claim 12 wherein the non planar prism is a substantially conical prism.

16. *(previously presented)* The system of claim 12 wherein the scanning and capturing system is coupled to the display processing system via a data network.